PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Ad	ct of 1995, no person		llection of inf	ormation unless	it displays a valid OMB control number.
AFE.		Application Number	10/634,45	5	
TRANSMITT	AL	Filing Date	August 4,	2003	
MAY 2 2 7006 FORM		First Named Inventor	David J. C	arpenter	
MAY & Z TOOL &		Art Unit	2837		
(In he wood for the commence of the commence o	flor initial filing)	Examiner Name	J. Donels		
TRADES CORRESPONDENCE A	ner mgai ming)	Attorney Docket Number	101/06		
Total Number of Pages in This Subm	ission		101/00		
	ENCI	LOSURES (Check all	that apply)	
Fee Transmittal Form Fee Attached Amendment/Reply After Final Affidavits/declaration Extension of Time Request Express Abandonment Request Information Disclosure State Certified Copy of Priority Document(s) Reply to Missing Parts/ Incomplete Application Reply to Missing Part under 37 CFR 1.52 of	n(s)	Drawing(s) Licensing-related Papers Petition Petition to Convert to a Provisional Application Power of Attorney, Revocation Change of Correspondence of Terminal Disclaimer Request for Refund CD, Number of CD(s) Landscape Table on Cirks	Address	Appe of Ap Appe (Appe	Allowance Communication to TC all Communication to Board peals and Interferences all Communication to TC all Notice, Brief, Reply Brief) rietary Information as Letter r Enclosure(s) (please Identify v):
Firm Name	SIGNATURE C	OF APPLICANT, ATTO	RNEY, C	R AGENT	
A					
Signature	Carpin	ta			
Printed name Robort N. Corpor					
Date Robert N. Carpen			Dog No		
Date 5/19	106		Reg. No.	40,409	
I hereby certify that this corresponde sufficient postage as first class mail the date shown below:	ence is being facsir	CATE OF TRANSMISS mile transmitted to the USPT dressed to: Commissioner fo	O or depos	ited with the U	nited States Postal Service with Alexandria, VA 22313-1450 on
01	dut Che	put			
Typed or printed name Robert N	l. Carpenter			Date	5/19/06

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	David J. Carpenter)
Filed:	August 4, 2003))Group Art Unit: 2837
Serial No.:	10/634,455))Examiner: J. Donels
Title:	Electronic Tuning System and Methods of Using Same)
Atty Docket No.:	101-06)

INFORMATION DISCLOSURE STATEMENT PURSUANT TO 37 C.F.R. §§ 1.97 AND 1.98

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicants wish to bring the following information to the attention of the Examiner in connection with the subject application. Attached hereto please find Form PTO-1449, on which the citations are listed, and copies of citations 14 34, and 37-43. Copies of citations 1-13, 15-33, 35-36, and 44-45 were provided in parent case Ser. No. 09/835,259.

This Disclosure Statement is not intended to substitute for the Examiner's own search. It is believed, however, that this Disclosure Statement will assist the Examiner in the search. The Examiner is expressly requested to review each item cited herein and to make all of the cited items of record in this case as having been considered. The completed Form PTO-1449 is attached for this purpose.

CERTIFICATE OF MAILING

I hereby certify that this document is being deposited with the United States Postal Service with sufficient postage as First Class mail in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA, 22313-1450, on this day of May 2006.

Citation of the items herein is not to be construed as an admission that the information is within the scope and content of the prior art relevant to the present invention, that the information is prior in time to a particular date which may be relevant to the present patent application, that the information is otherwise prior art with respect to the present invention, or that the information cited is material to the claims. In addition, applicants reserve the right to later set forth how the present invention is distinguished over the disclosure of any document or other prior art, including the information cited herein.

Respectfully submitted,

Robert N. Carpenter

Registration No. 40,409 Attorney for Applicants

Robert N. Carpenter 210 Birchwood Ave. Deerfield IL 60015 847-317-0512

PTO/SB/08A (07-05)

Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE equired to respond to a collection of information unless it contains a valid OMB control number. Under the Paperwork Reduction A A of 1995, no <u>persons</u>

Sheet 1

Substitute for form 1449/PTO MAY 2 2 7006 INFORMATION DESCLOSE STATEMENT BY

(Use as many sheets as necessary)

of 4

Complete if Known		
Application Number	10/634,455	
Filing Date	August 4, 2003	
First Named Inventor	David J. Carpenter	
Art Unit	2837	
Examiner Name	J. Donels	
Attorney Docket Number	101/06	

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ^{2 (f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	^{US-} 2,924,776	2/1960	Peterson	
	2	^{US-} 2,958,250	11/1960	Poehler	
	3	^{US-} 3,509,454	4/1970	Gossel	
	4	^{US-} 3,631,756	1/1972	Mackworth-Young	
	5	^{US-} 3,696,293	10/1972	Hoffman et al.	
	6	^{US-} 3,722,353	3/1973	Westhaver	
	7	^{US-} 3,766,818	10/1973	Prohofsky	
	8	^{US-} 3,901,120	8/1975	Youngquist	
	9	^{US-} 3,968,719	7/1976	Sanderson	
	10	^{US-} 3,982,184	9/1976	Sanderson	
	11	^{US-} 4,014,242	3/1977	Sanderson	
	12	^{US-} 4,018,124	4/1977	Rosado	
	13	^{US-} 4,142,434	3/1979	Gross	
	14	^{US-} 4,242,935	1/1981	Peterson et al.	
	15	US- 4,429,609	2/1984	Warrender	
	16	US-4,732,071	3/1988	Deutsch	·
	17	^{US-} 4,796,509	1/1989	Mizuguchi et al.	
	18	^{US-} 4,991,484	2/1991	Kawashima	
	19	^{US-} 5,016,515	5/1991	Scott	

		FORE	GN PATENT DOCU	MENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	6
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T"
	ļ <u> </u>					
						1

Examiner	Date	
Signature	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \(^1\)Applicant's unique citation designation number (optional). \(^2\)See Kinds Codes of USPTO Patent Documents at \(\frac{www.uspto.gov}{www.uspto.gov}\) or MPEP 901.04. \(^3\)Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \(^4\)For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \(^5\)Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. \(^6\)Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandra, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND

TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Complete if Known Substitute for form 1449/PTO Application Number 10/634,455 Filing Date August 4, 2003 INFORMATION DISCLOSURE First Named Inventor David J. Carpenter STATEMENT BY APPLICANT Art Unit 2837 (Use as many sheets as necessary) **Examiner Name** J. Donels 101/06

Sheet	2	of 4		Attorney Docket Number 101/06	
			II S DATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ^{2 (f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	20	^{US-} 5,056,398	10/1991	Adamson	
	21	^{US-} 5,111,392	5/1992	Matin	
	22	^{US-} 5,202,528	4/1993	lwaooji	
	23	^{US-} 5,285,711	2/1994	Sanderson	
	24	^{US-} 5,349,130	9/1994	lwaooji	
	25	^{US-} 5,388,496	2/1995	Miller et al	
	26	^{US-} 5,396,827	3/1995	Miller et al	
	27	^{US-} 5,440,756	8/1995	Larson	
	28	^{US-} 5,549,028	8/1996	Steinberger	
	29	^{US-} 5,719,343	2/1998	Reyburn	
	30	^{US-} 5,773,737	6/1998	Reyburn	
	31	^{US-} 5,777,248	7/1998	Campbell	
	32	^{US-} 5,780,759	7/1998	Szalay	
	33	^{US-} 5,814,748	9/1998	Reyburn	
	34	^{US-} 5,902,946	5/1999	Kogure et al.	
	35	^{US-} 5,929,358	7/1999	Reyburn	
	36	^{US-} 6,066,790	5/2000	Freeland et al	
	37	^{US-} 6,137,046	10/2000	Kamiya	
	38	^{US-} 6,529,843	3/2003	Carpenter	

		FOREIGN	PATENT DOCU	MENTS		
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
						Ш

Examiner	Date	
Signature	Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Coi	mplete if Known)
Application Number	10/634,455	
Filing Date	August 4, 2003	
First Named Inventor	David J. Carpenter	
Art Unit	2837	
Examiner Name	J. Donels	
Attorney Docket Number	101/06	
	Application Number Filing Date First Named Inventor Art Unit Examiner Name	Filing Date August 4, 2003 First Named Inventor David J. Carpenter Art Unit 2837 Examiner Name J. Donels

Examiner Cit	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant
Initials*	No.	Number-Kind Code ^{2 (# known)}	MM-UD-YYYY	Applicant of Cited Document	Figures Appear
	39	^{US-} 6,613,971	9/2003	Carpenter	_
	40	^{US-} 6,627,806	9/2003	Carpenter	
		US-			
	<u> </u>	US-			
		US-			
	 	US-			
		US-			
	 	US-			
		US-			

		FOREI	GN PATENT DOCU	MENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
_		Country Code ³ Number ⁴ Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	⊤°
						<u> </u>
						┢╌

Examiner	Date	
Signature	Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08B (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO	Complete if Known	
Subsulute for form 1445/F TO	Application Number	10/634,455
INFORMATION DISCLOSURE	Filing Date	August 4, 2003
STATEMENT BY APPLICANT	First Named Inventor	David J. Carpenter
	Art Unit	2837
(Use as many sheets as necessary)	Examiner Name	J. Donels
Sheet 4 of 4	Attorney Docket Number	101/06

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	41	LATTARD, Influence of inharmonicity on the tuning of a piano-Measurements and mathematical simulation, J. ACOUST. SOC. AM. 94 (1), pp. 46-53, July 1993	
	42	FLETCHER, Normal Vibration Frequencies of a Stiff Piano String, J. ACOUST. SOC. AM. 36 (1), pp. 203-209, January 1964	
	43	YOUNG, Inharmonicity of Plain Wire Piano Strings, J. ACOUST. SOC. AM. 24 (3), pp. 267-273, May 1952.	
	44	ROBERTS, The Calculating Technician (1990), pp. 29-46.	
	45	BALDASSIN, On Pitch (1994), pp. 1-112 (entire book).	
_			

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.